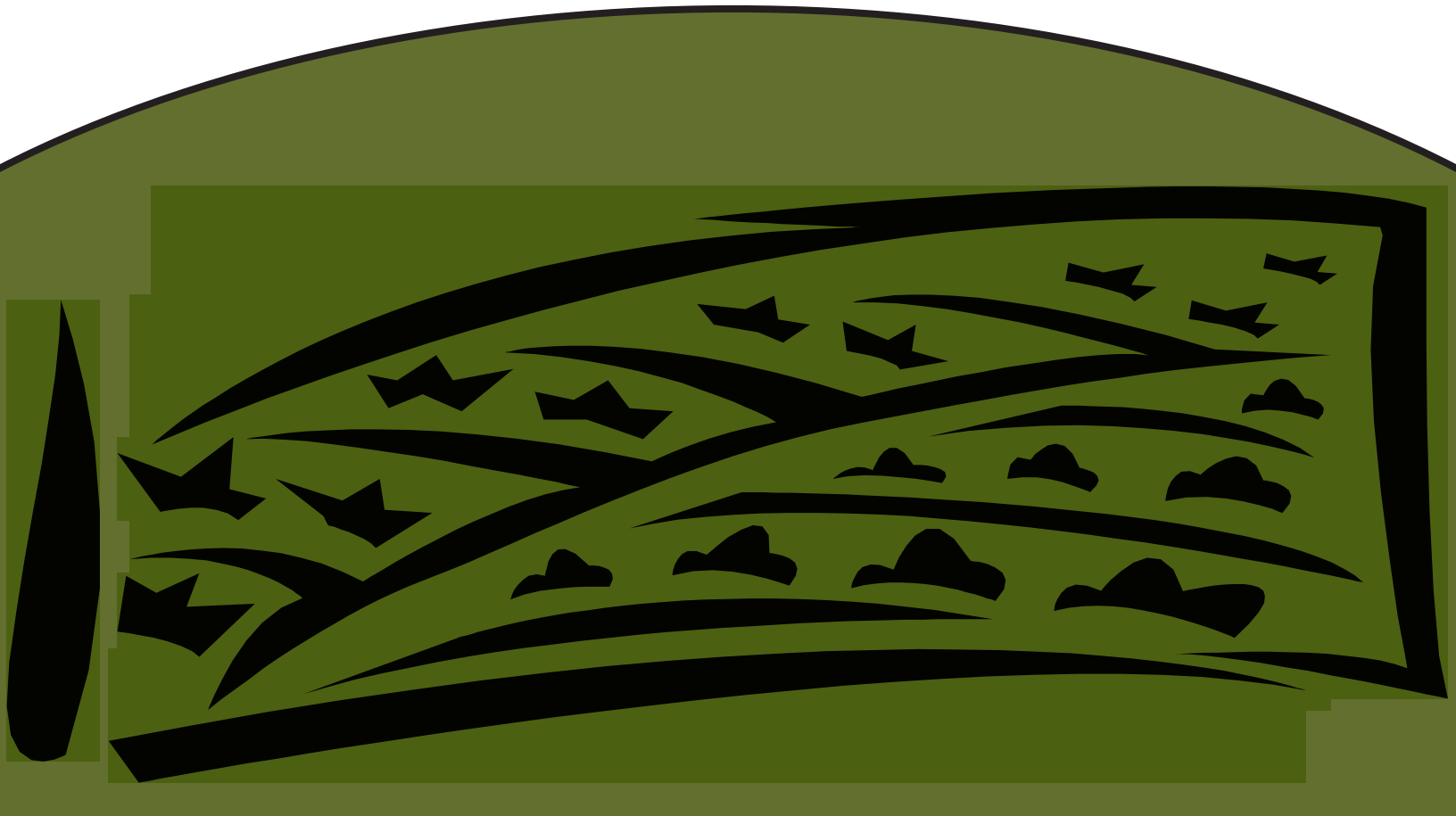
Iowa Department of Public Health

Iowa

Rural and Agricultural

Health and Safety Resource Plan

2011 Executive Summary Report



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Assuring access, quality and affordable health care in rural Iowa is a high calling. Iowans are fortunate to have individuals and organizations with exemplary knowledge and expertise of rural and agricultural health issues. The Iowa Department of Public Health gratefully acknowledges the individuals who offered their valuable time, shared resources, and contributed to the research, development and review of this document. Also we recognize the Iowa Rural Health Association for hosting a series of webinars that focused on the topics presented in this document.

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Executive Summary Report

The development of the Rural and Agricultural Health and Resource Plan (RAHSRP) included a survey of individuals in Iowa who have expertise and interest in rural health. The survey results helped to identify priority topic areas and concerns for rural and agricultural health and safety in Iowa. The RAHSRP includes seven sections that focus on "rural". Each section is designed to reveal information, data, graphics, and resources at the national and state level. Most important, each section highlights "**in Iowa**" information and promising practices which assist the reader to an understanding of the issues, challenges, complexities, and community victories associated with health, safety, and wellness in rural Iowa. This Executive Summary Report highlights portions Iowa specific information. (See full report for references and sources).

It is important to note the development of the RAHSRP was a combined endeavor. Several individuals and organizations with valuable expertise and experience graciously offered guidance, direction, research, data, resources and the stories included in the document.

Iowa is the stereotypical rural environment. Agriculture and ag-related businesses make up the majority of the state's economic base. Iowa's rural populations have similar characteristics to other rural states in the nation: older populations, lower incomes, and seasonal unemployment above regional averages. Despite those characteristics, Iowa's rural populations demonstrate greater satisfaction with life, increased engagement and connectedness within their communities, and fewer impacts from impoverishment or unemployment because of community support systems.

What is rural and why is it important? Several demographic trends are reshaping economic and social conditions across nonmetro/rural counties. The trends serve as key indicators of rural health, and as generators of growth and economic expansion. The definition for rural

depends on the topic, the issue it is related to, and the definition source. Geographic and census data are a tool to determine policy and funding. Although the word rural is commonly substituted for nonmetro in speech and writing, it is becoming increasingly misleading especially as related to health matters. Funding, programs and resources identified for rural communities need to stream into Iowa areas that have a rural environment and culture.

Lost rural population

Population wise 43.3 percent of Iowa is rural with 20 percent of the rural population involved in production agriculture. In Iowa, there are 92,856 farms (3rd in the USA). Seventy seven Iowa counties lost population between 2000 and 2009. So-- while according to federal designations the number of counties geographically designated rural shrinks, also the number of persons living in rural areas is decreasing. There are several reasons for the decreasing population including the economy (lack of jobs), and lack of suitable housing.

States can further define population by density. Population density is number of persons per square mile.

Iowa Population Density Estimates 9/2010				
Population Density Peer Group	**Count**	**Peer Group Definitions (Per Square mile)**	**Population Estimate**	**Percent of Population**
Urban	7	150 or more persons	1,236,534	41.14%
Semi-Urban	19	40-149 persons	811,614	27%
Dense Rural	48	20-39 persons	748,053	24.89%
Rural	25	6-19 persons	209,270	6.96%
All Iowa Counties	99	State Average: 53.8 persons	3,005,471	100%

What about access to health care? There are numerous issues affecting access to health care in rural Iowa. Most of the barriers mirror the health care access challenges reported throughout the nation's rural areas. However since 90 percent of the land mass in Iowa is considered rural and in production agriculture, and half of the population live in what is considered a rural area, the issue of health care access is more evident in Iowa. ***Transportation and community development*** are two vitally important issues relating to health care access. To briefly summarize---rural areas that have public transportation systems, and economically effective, health conscious communities are more likely to have adequate access to quality health care.

In Iowa, there is a strong infrastructure of primary and secondary roads based on a historical emphasis of farm to market routes. The majority of the population in Iowa uses private automobiles to access health care and other community services. In 2009, 1,600,012 automobiles were registered in Iowa, making the ratio of Iowans to cars approximately 2:1. Despite a large network of roadways and heavy utilization of personal vehicles, inadequate transportation has long been identified as a major issue in rural Iowa where 43.6 percent of Iowans live and 21.5 percent are over the age of 65.

Ongoing community development including structures, businesses and public safety infrastructure can bend the outward migration of young families. Typically, rural communities lose young people who seek further education and job establishment. However, families and elderly/retirees tend to stay in the communities that are involved in community development.

To support and sustain Iowa farm families, rural areas still need a town nearby with schools, food, fuel, health care, a community structure, and religious centers.

What about heath care services in rural areas? - There are numerous factors that contribute to why and how a person in rural Iowa might need health care, seek it out, receive quality care or---possibly not receive all the services required. The health care services included in RAHSRP are: **Clinics, dental/oral health, emergency medical services, hospitals, long term care, mental/behavioral health, pharmacy, and veterans' health care.** Overall while there is a high

level of quality care in rural Iowa, health care access for rural residents is not equal to the services and costs available in urban areas.

Iowa Clinics - four clinic programs **in Iowa** that offer primary care services to underserved clients are:

- **Community Health Centers** (CHC) and **Rural Health Clinics** (RHC) are primary health care clinic programs that offer comprehensive health services~~,~~ are government-funded or reimbursed, and have specific federal and state operating guidelines.
- **Free Clinics** are primary care, do not offer comprehensive care, and traditionally do not receive federal or state funding; however, in Iowa some received limited state funds.
- **Proteus Clinics** are primary care, do not offer comprehensive care, are government-funded, and have specific federal and state operating guidelines related to migrant workers.

AgriSafe Clinics

The AgriSafe Network was founded in Iowa and now has locations in 18 states and two countries. **In Iowa,** AgriSafe clinics, located in Ames, Ackley, Baxter, Carroll, Iowa City, LeMars, Madison, Mt. Pleasant, Oskaloosa, Peosta, Spencer and West Burlington, provide preventive occupational health services to farmers and their families who might not otherwise be able to afford these services. Farmers are at an increased risk of suffering from noise-induced hearing loss, chronic back problems, respiratory disease, stress, and farm-related injuries and fatalities.

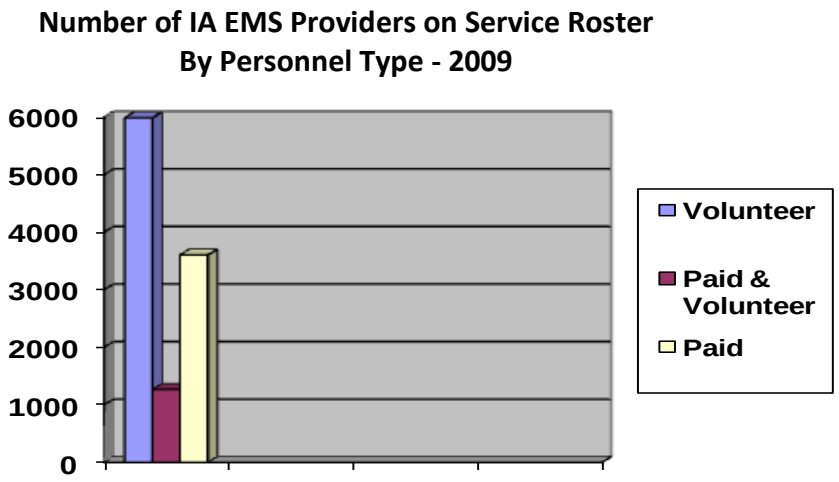
Iowa Hospitals - Ninety of Iowa's 99 counties have at least one community hospital, leaving no Iowan more than 25 miles from a hospital. Twenty-two community hospitals are classified as urban hospitals because they are located in areas with a population of greater than 50,000 (also referred to as a Metropolitan Statistical Area or MSA). The large majority of Iowa's community hospitals, ninety-two in all, are classified by Medicare as rural hospitals because they are

located in areas with a population of less than 50,000. Of the 92 rural hospitals, 82 hospitals are also classified as critical access hospitals. Additionally, six rural hospitals are classified as rural referral centers because they are rural hospitals that have operating characteristics similar to urban hospitals. In a report of Critical Access Hospital (CAH), Iowa's CAHs ranked higher in *every* area of patient quality than hospitals nationally.

2008 HCAHPS Results for CAHs in Iowa and Nationally and all US Hospitals	**Mean (average) for:**		
Percent of patients who reported that:	**Iowa CAHs (n =31)**	**CAHs Nationally (n = 442)**	**All US hospitals (n = 3,765)**
Nurses always communicated well	80%	79%	74%
Doctors always communicated well	83%	83%	80%
Patient always received help as soon as wanted	69%	71%	62%
Pain was always well controlled	71%	71%	68%
Staff always explained about medications before giving them to patient	62%	63%	59%
Yes, staff gave patient information about what to do during recovery at home	82%	82%	80%
Area around patient room was always quiet at night	62%	61%	56%
Patient room and bathroom were always clean	82%	78%	69%
Patients gave an overall hospital rating of 9 or 10 (high) on 1-10 scale	73%	70%	64%
Patients would definitely recommend the hospital to friends and family	73%	71%	68%

There is an imperative to ensure access to hospital care and services for residents in Iowa's many rural areas. Federal and state policy makers and agencies must support programs and funding that enable rural hospitals to reduce and eliminate the numerous challenges they face, so they can remain a vital components of their communities' health.

Iowa Emergency Medical Services - **In Iowa,** urban EMS transport is provided by hospital-based, private, or fire department-based ambulance services that include paid certified staff. In rural or small cities, EMS departments typically include volunteer staff or limited paid positions with a volunteer base. Iowa continues to have a majority of volunteer EMS providers serving rural communities. While there is nothing more valuable than a dedicated community volunteer, the time obligations and costs to the volunteer unit for training, equipment, and upkeep can become a community crisis.



Emergency Medical Services are vitally important to medical services in rural Iowa. Two circumstances for the daily need of effective EMS systems are: 1) Iowa is an agricultural state with a significant number of farm-related accidents, and 2) there are hundreds of thousands of commuters and travelers driving on two major interstate systems intersecting in central Iowa. In addition to the tremendous community efforts, counties need to ensure EMS services. Effective EMS, regulations and funding for staff training, data collection and continuation of successful programs are strategies to ensure EMS will continue to evolve and save lives in Iowa.

Long Term Care in Iowa - Long-term care as we knew it a generation ago is changing – medical advances are allowing people to live longer and Americans are demanding more options and services closer to home. Rural areas face particular challenges meeting Americans' needs for quality, accessible long-term care; rural Iowa is no exception. With a growing elderly population and declining rural populations, long-term care presents significant issues and priorities for rural Iowa.

There are three major trends occurring in Iowa, and nationally, that impact long-term care service quality and delivery in rural areas – an aging population; a declining overall population; and increased demand for services in home and community-based settings. The population of Iowans over age 65 is projected to increase 50 percent in the next two decades, compounding rural challenges since 75 percent of individuals over age 65 suffer from at least one chronic illness. It is well known that baby boomers will place stress on already-fragile health and long-term care systems throughout the country. And their desire to avoid institutional settings and

'age in place' will greatly influence the service and delivery options made available in the near future.

Long-Term Care Facilities - the following chart provides a summary of the total number of long-term care facilities in Iowa as of April 2010.

Type of Facility	Total Entities in Iowa	Maximum Occupancy
Free-standing nursing and skilled nursing facility	397	28,775
Free-standing nursing facility	10	1,244
Free-standing skilled nursing facility	3	142
Intermediate Care Facility – MR	141	3,127
Intermediate Care Facility – PMI	1	25
Residential Care Facility	97	3,555
Residential Care Facility – MR	52	678
Residential Care Facility – PMI	13	284
3-5 Bed Residential Care Facility – MR/MI/DD	27	134
Hospital	42	9,439
Critical Access Hospital	82	2,498
Psychiatric Medical Institute for Children (PMIC)	33	532
Chronic Confusion and Dementing Illness (CCDI) Unit	117	2,316
Totals for Long-Term Care in Iowa	**1,015**	**52,749**

Long-term care is an increasingly vital service in Iowa, particularly in rural communities. As the state plans for the aging of the baby boomers, it is important to continue finding solutions. Also, for rural challenges to long-term care, solutions with issues such as transportation, lack of available and qualified staff, and qualified training for direct care workers working in facilities and private homes. To maintain comprehensive, long-term care services for the growing aged population, rural hospitals need reimbursement levels that meet the level of care delivered.

Iowa Dental/Oral Health - Disparities in access to dental care are well documented. *"Populations that have low incomes, are behaviorally or physically disabled, or reside in rural areas obtain less care and have poorer oral health than more affluent, healthy and urban/suburban populations,"* explained Howard L. Bailit, D.M.D., Ph.D., co-director of the *Dental Pipeline* program. About 108 million people in the U.S. have no dental insurance. The U.S. has about 141,800 working dentists and 174,100 dental hygienists. However, there are 4,230 Dental Health Professional Shortage Areas with 49 million people living in them. **In Iowa**,

54 counties are designated as dental health care shortage areas. Designation is pending for an additional 14 counties.

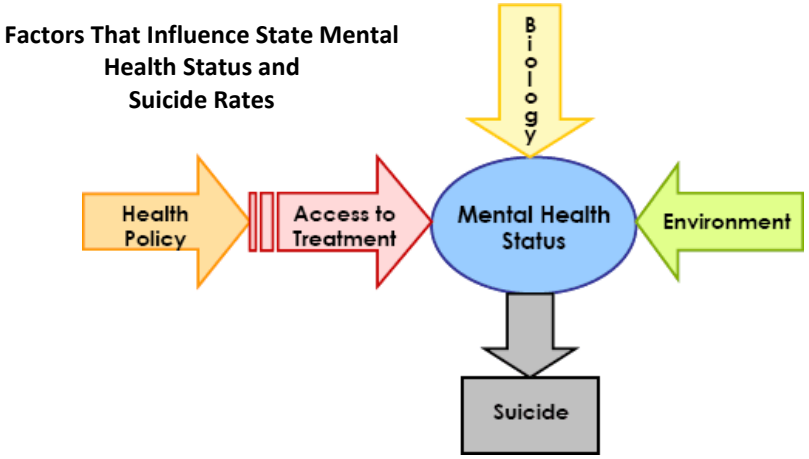
Iowa was one of seven states studied in a Health and Human Resources and Services (HRSA) report which examined emergency department visits for oral health conditions.

	All ED visits	ED visits for an oral health complaint
Iowa	**868,454**	**11,351**
Total number of oral health diagnoses as a percentage of ED visits	1.3%	NA
Percent of preventable ED oral health diagnosis	NA	42.8
Percent with diagnosis of low severity	NA	52.3
Location:		
Urban area	51.1	53.9
Rural area	48.9	*46.1
Payer:		
Medicare	19.9	8.1
Medicaid	20.3	**27.2
Private insurance	42.2	28.9
Self-pay	17.5	35.9

In Iowa, continued growth and strengthening of dental professional education and clinical programs that will expand dental services to the general population and underserved, uninsured and underinsured Iowans will increase the overall health of Iowa residents, and will decrease hospital and clinic costs related to dental problems. Expansion of the I-Smile™ program to include maternal health programs and nursing homes would reach more at-risk populations.

Mental/Behavioral Health in Iowa - Because mental health and physical health go hand-in-hand, mental health can directly impact personal wellness, job satisfaction, productivity, family dynamics and overall health of the community. Comprehensive mental health services include inpatient treatments, counseling and psychotherapy, social services, peer and professionally facilitated supports, as well as medication as appropriate. Rural residents are less likely to receive needed mental health and behavioral therapies than those residing in urban areas. *Ranking of America's Mental Health: An Analysis of Depression across the States,* examined depression as a chronic illness and the principal cause of suicide. The data from the study

ranked states for depression and suicide. **Iowa was ranked fourth highest for depression** and 23rd for suicide. The report also concluded: 1) the more generous a state's mental health parity coverage, the greater the number of people in the population that receive mental health services and described 2) the factors that influence state mental health status and suicide rates. (See graphic below.)

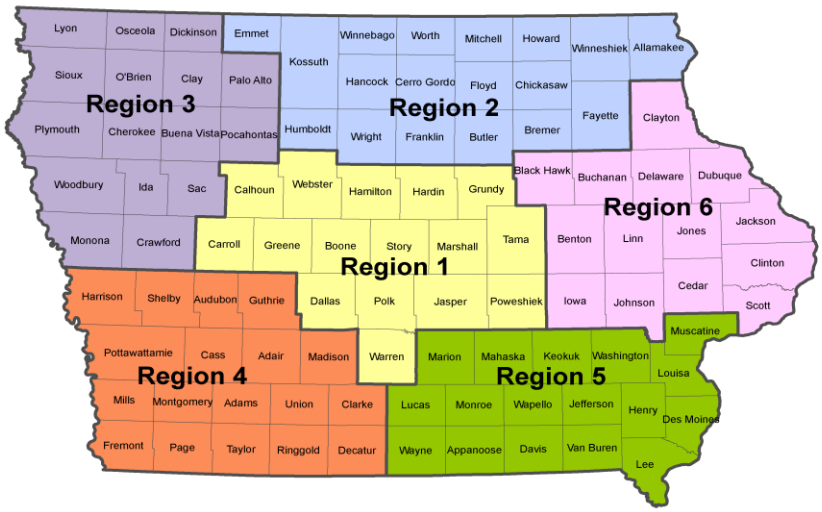


Mental health care is currently in crisis mode in rural America and in Iowa. Major contributing factors are insufficiency of a qualified health workforce and reimbursement. There also is not ample funding specific to those in rural areas who are not seriously mentally ill and who rather need counseling and outpatient interventions for acute episodes or life factors that may lead to serious health and family situations. There are too few psychiatric beds in hospitals and declining outpatient mental health services in rural communities. Rather those seeking acute mental health interventions are presenting in emergency departments. Primary care providers in clinics deliver mental health services because of the shortage of "expert" mental health practitioners in their communities, but cannot always get reimbursement. In spite of the challenges, there are some promising practices and innovative programs in rural Iowa.

How is the local public health agency involved? One of the most beneficial aspects of public health is; local health agencies have in-depth knowledge about their communities and traditionally maintain a high profile of involvement in matters that affect overall health. They are "in the trenches" and have close contact with residents. Local health agencies' ability to approach the issues that determine good or bad health makes them an invaluable asset in health care reform provisions that address prevention and wellness. At the Iowa Department of Public Health, 32 of the local public health subcontracts are hospital based. In Iowa many

rural hospitals interact with public health every day. The IDPH contracts with each county board of health or board of supervisors to provide population-based and home care aide services. Public health nursing and home care aide services are available in every county. Currently there are six public health services regions. Each region has an assigned IDPH Regional Community Health Consultant who works with area agencies to promote and protect public health.

Iowa Local Public Health Regions



What about farmers and farm families? Agriculture is the most hazardous occupation in the U.S., as well as in Iowa, with an occupational fatality rate 6 times higher than the general working population. In Iowa, farmers make up about 37 percent of all occupational fatalities in the state, even though they only comprise 7 percent of the total workforce (farm workforce here does not include family member). The rural population can be divided into rural farm and rural non-farm sectors. There are about equal numbers in each sector. The farm sector has a unique set of occupational health and safety issues in addition to sharing the health and safety issues of the general rural population.

Although agricultural fatalities in Iowa have declined over the years, agriculture is still by far the most hazardous industry in which to work. Besides the social and psychological trauma these fatalities and injuries take on our fellow Iowans, there are severe economic concerns as well. As agriculture is such a fundamental industry in our state, the injuries and fatalities make a big

impact on the state's economy as each fatality costs $442,769. For the approximately 30 fatalities we have experienced in Iowa in recent years, this would add up to $16,364,670 annually. Studies have shown that a typical producer (and/or his/her insurer) spends about $512 annually on illnesses and injuries as a result of their work exposures. Multiplying this by our 92,000 farms, results in an estimated $47.5 million expense. When combined with the expense of fatalities, Iowans experience a $63.8 million annual loss in medical expenses and labor loss annually resulting from agricultural injuries.

Nationally and in Iowa immigrant worker population does not appear generally as healthy as our indigenous farmers and farm workers.

Migrant Health Problems	**Data: Proteus, by Antonio Heras**
Occupational Exposures	Lifestyle Exposures
Unintentional injuries	Oral health problems
Pesticide exposure	Infectious diseases (TB, HIV, STDs)
Skin diseases	Mental health problems
Eye injuries	Substance abuse
Respiratory disease	Chronic diseases
	Nutrition deficiencies

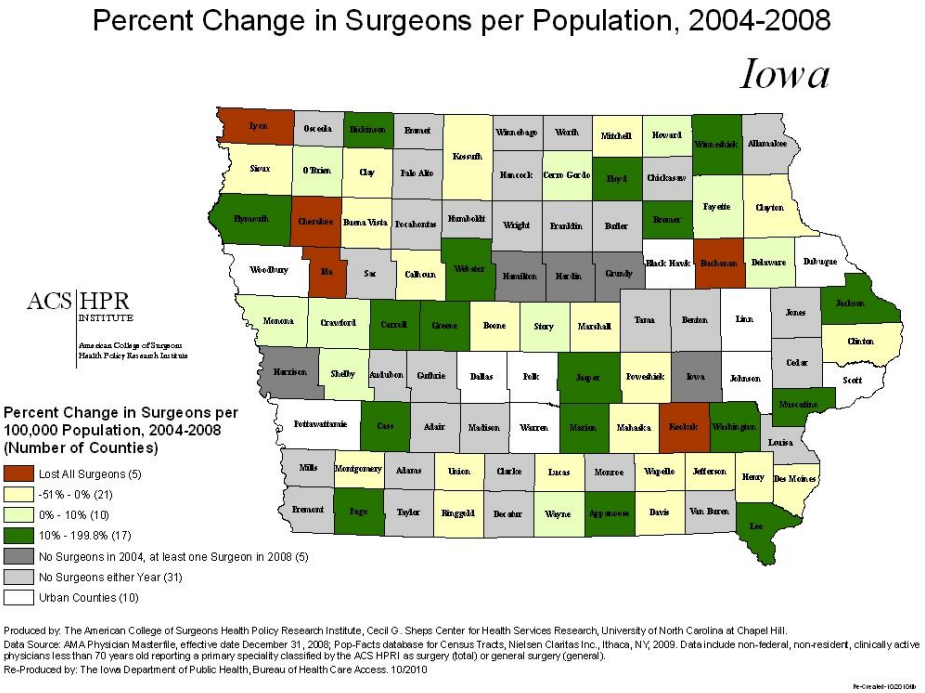
Iowa is similar to many rural states in that we are challenged by the lack of ability to provide sufficient, accessible, and affordable health care to our rural communities. Even if general health care were sufficient in our state, the unique health issues of our agricultural population would not be well served. Awareness, understanding, and ability to identify, treat and prevent agricultural occupational problems are not available in our general rural health care system. There has been an emerging specialty in the field of rural primary health care and occupational health, called "agricultural medicine". Without this type of specialty care, the overall health of our rural population will continue to lag behind.

What are the health workforce implication for rural? The shortage of healthcare workers in rural communities is the greatest rural health issue today. While about 20 percent of the American population – approximately 62 million people – live in rural areas, only about nine percent of all physicians and 12 percent of all pharmacists practice in rural communities. Rural areas average about 30 dentists per 100,000 residents, while urban areas average

approximately twice that number. Shortages of nurses (both registered nurses and licensed practical nurses) and allied health professionals also abound. Iowa rural health workforce reflects the national norm, however we rank lower for mental and behavioral health access than 46 other states.

Surgeons in Rural Iowa

Between 2004 and 2008, there was an identifiable decrease in the number of surgeons practicing in rural Iowa counties. Some reasons for the decrease of surgeons are associated with: high costs for surgery equipment, increasing rates of referrals to metro surgical specialty centers and the spiraling cost of liability insurance for surgeons.

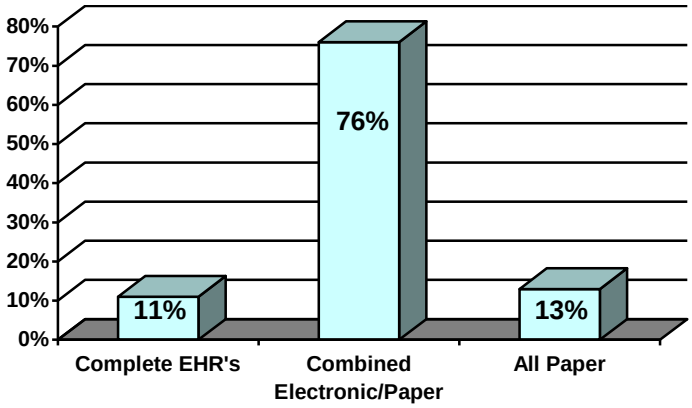


As those living in rural communities already know, a shortage of healthcare workers has a profound impact in a variety of ways: decreased access, which has a profound impact on quality of care; increased stress in the workplace; increased medical errors; increased workforce turnover/decreased retention rates; and increased healthcare costs. The projected national trends will only exacerbate the impact of rural health workforce shortages that currently exist. Recent health reform legislation may be favorable to rural family medicine residency training and other health professional training and education programs. State agencies, educational institutions, programs dedicated to health professional recruitment and retention, and rural organizations need to collaborate with a comprehensive strategy to increase success.

What are the information technology implications for rural? Health information technology (HIT) has the potential to revolutionize the delivery of health care. In Iowa the "rural factor" related to health information technology is important because: 1) geographically we are a largely rural state and 2) because of the large number of critical access and smaller hospitals (87) and number of certified rural health clinics (141) involved. The three important HIT areas for rural are: Electronic health records (EHR), telemedicine, and the state heath information exchange (HIE) program. Using HIT to drive improvements in healthcare in rural Iowa will require the support of many diverse stakeholders in the health care system including practicing clinicians, hospitals, payers, and HIT suppliers.

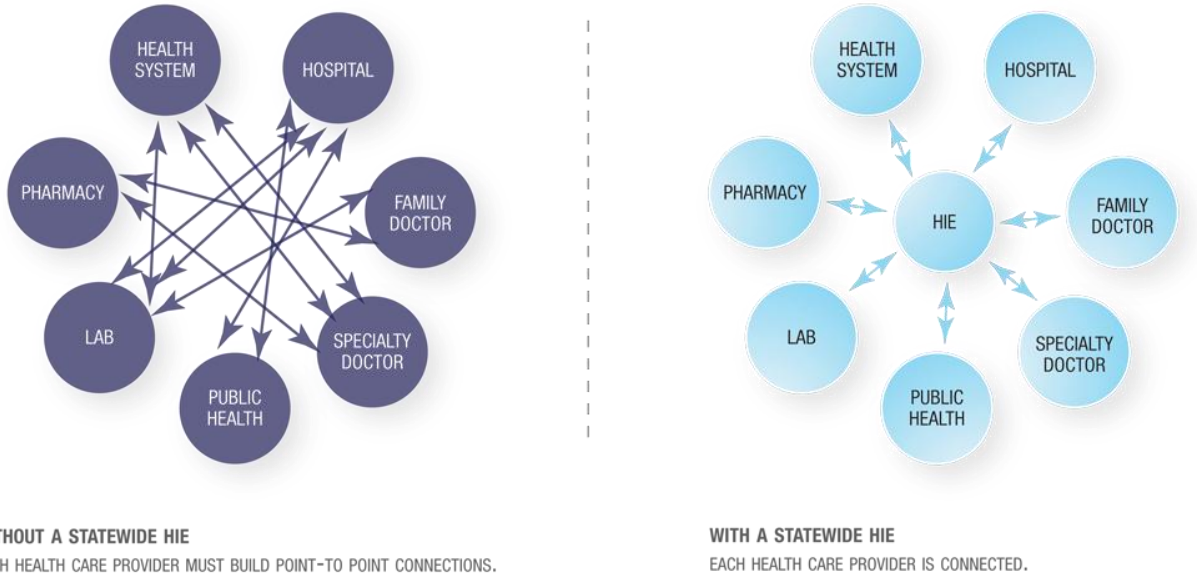
2009 survey of Iowa hospitals use of EHR.

(Source: IA Foundation for Medical Care)



Health information technology developed as a comprehensive coordinated system will be costly, effort intensive and will require the talents and vision of several organizations and individuals. In Iowa, the long-term benefits to rural communities and residents will culminate in real-time access to health care and information exchange.

Health Information Exchange (HIE) - Iowa e-Health, formed by the Iowa Department of Public Health (IDPH), is a collaboration of consumers, health care providers, payers, and others to establish an electronic health information exchange for the state of Iowa. The Iowa HIE will allow participants to securely access vital patient health information throughout the state and beyond. (See graphic below.)



Using HIT to drive improvements in healthcare in rural Iowa will require the support of many diverse stakeholders in the health care system including practicing clinicians, hospitals, payers and HIT suppliers. State and federal funding and legislation coupled with adequate technical assistance are major factors in the successful development and implementation of health information technology in Iowa.